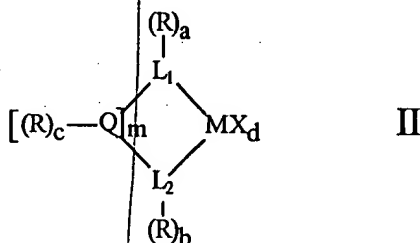


comprising a cocatalyst and a catalyst component, wherein the catalyst component is supported on a porous inorganic solid, wherein the catalyst component is {characterized in that is} defined by {general formulas} formula I or II



wherein:

R{,} groups are equal to or different from each other; {,} R is hydrogen or a radical {which contains} containing from 1 to 20 carbon atoms; {this group} R optionally contains {heteroatoms} a heteroatom selected from the group consisting of elements from groups 14 {to} through 16 of the periodic table of the elements and boron; at least one {group} R group contains {a group} an OSiR"<sub>3</sub> group, wherein R" is selected from the group {comprising} consisting of: linear or branched C<sub>1</sub>-C<sub>20</sub> alkyl, C<sub>3</sub>-C<sub>20</sub> cycloalkyl, C<sub>6</sub>-C<sub>20</sub> aryl, C<sub>7</sub>-C<sub>20</sub> alkenyl, C<sub>7</sub>-C<sub>20</sub> arylalkyl, C<sub>7</sub>-C<sub>20</sub> arylalkenyl, {or} and C<sub>7</sub>-C<sub>20</sub> alkylaryl, linear or branched};

Q is selected from {a group comprising} the group consisting of: boron {or an element} and elements from groups 14 {or} and 16 of the periodic table{,}; when m > 1, {groups} Q groups are equal to or different from each other; {the} free valences of every Q are filled with {groups} the R group or groups according to {the} a value of c {index}; two {groups} R groups optionally are united to form a ring having from 5 to 8 atoms; m {value range} ranges from 1 to 4;

L{,} groups are equal to or different from each other{,}; L

is a cyclic organic group united to M through a  $\pi$  bond, L {it} contains a cyclopentadienyl ring{,} that optionally is fused with one or more other rings, or {it} L is an atom selected from the group consisting of elements from groups 15 {or} and 16 of the periodic table;

L<sub>1</sub> and L<sub>2</sub>{,} are equal to or different from each other{,}; L<sub>1</sub> and L<sub>2</sub> have the same meaning {of} as L;

M is a metal selected from the group consisting of: elements from groups 3, 4, and 10 of the periodic table, {lanthanide or actinide} lanthanides, and actinides;{.}

X{,} groups are equal to or different from each other{,}; X is selected from {a} the group {comprising} consisting of: halogen, hydrogen, OR'', N(R'')<sub>2</sub>, C<sub>1</sub>-C<sub>20</sub> alkyl, and {or} C<sub>6</sub>-C<sub>20</sub> aryl; wherein R'' is selected from the group {comprising} consisting of: linear or branched C<sub>1</sub>-C<sub>20</sub> alkyl, C<sub>3</sub>-C<sub>20</sub> cycloalkyl, C<sub>6</sub>-C<sub>20</sub> aryl, C<sub>7</sub>-C<sub>20</sub> alkenyl, C<sub>7</sub>-C<sub>20</sub> arylalkyl, C<sub>7</sub>-C<sub>20</sub> arylalkenyl, and {or} C<sub>7</sub>-C<sub>20</sub> alkylaryl{, linear or branched};

x is 1 or 2, y is 2 or 3 in such a way that x + y = 4;

d is an integer ranging {ranges} from 0 to 2; and a, b and c are integers from 0 to 10{,} in such a way that a + b + c ≥ 1.

2. (amended once) A catalyst {Catalyst component} according to claim 1 wherein in formula I or II {characterized in that} R is selected from the group {comprising} consisting of: hydrogen, SiR'<sub>3</sub>, linear or branched C<sub>1</sub>-C<sub>20</sub> alkyl, C<sub>3</sub>-C<sub>20</sub> cycloalkyl, C<sub>6</sub>-C<sub>20</sub> aryl, C<sub>7</sub>-C<sub>20</sub> alkenyl, C<sub>7</sub>-C<sub>20</sub> arylalkyl, C<sub>7</sub>-C<sub>20</sub> arylalkenyl, and {or} C<sub>7</sub>-C<sub>20</sub> alkylaryl, {linear or branched or a group SiR'<sub>3</sub>} wherein R' is selected from the group consisting of: OSiR''<sub>3</sub>, linear or branched C<sub>1</sub>-C<sub>20</sub> alkyl, C<sub>3</sub>-C<sub>20</sub> cycloalkyl, C<sub>6</sub>-C<sub>20</sub> aryl, C<sub>7</sub>-C<sub>20</sub> alkenyl, C<sub>7</sub>-C<sub>20</sub> arylalkyl, C<sub>7</sub>-C<sub>20</sub> arylalkenyl, and {or} C<sub>7</sub>-C<sub>20</sub> alkylaryl{,

linear or branched or  $\text{OSiR}''_3$  at least one {group} R group contains {a group} an  $\text{OSiR}''_3$  group, wherein  $\text{R}''$  is selected from the group {comprising} consisting of: linear or branched  $\text{C}_1\text{-C}_{20}$  alkyl,  $\text{C}_3\text{-C}_{20}$  cycloalkyl,  $\text{C}_6\text{-C}_{20}$  aryl,  $\text{C}_7\text{-C}_{20}$  alkenyl,  $\text{C}_7\text{-C}_{20}$  arylalkyl,  $\text{C}_7\text{-C}_{20}$  arylalkenyl, and {or}  $\text{C}_7\text{-C}_{20}$  alkylaryl{, linear or branched}; and optionally all {these} the R groups contain a heteroatoms selected from the group consisting of: elements of groups 14 {to} through 16 of the periodic table of the elements and boron.

a' 3. (amended twice) A catalyst {Catalyst component} according to claim 1 wherein in formula I or II {characterized in that} M is selected from the group {comprising} consisting of: Ti, Zr, and {or} Hf.

4. (amended twice) A catalyst {Catalyst component} according to claim 1 wherein in formula I or II {characterized in that} the {group} R group containing the group  $\text{OSiR}''$  is selected from the group {comprising} consisting of:  $-\text{CH}_2\text{-CH}_2\text{-OSiMe}_3$ ,  $-\text{CH}_2\text{-CH}_2\text{-CH}_2\text{-OSiMe}_3$ ,  $-\text{CH}_2\text{-O-CH}_2\text{-OSiMe}_3$ ,  $-\text{O-CH}_2\text{-CH}_2\text{-OSiMe}_3$ , and  $-\text{SiMe}_2\text{-CH}_2\text{-CH}_2\text{-OSiMe}_3$ .

5. (amended twice) A catalyst {Catalyst component} according to claim 1 wherein in {characterized in that in the general} formula I{,} L is cyclopentadienyl or indenyl; M is zirconium;  $x$  is 2;  $y$  is 2; R is  $\text{C}_1\text{-C}_4$  alkyl, wherein at least one hydrogen of one R is substituted with  $\text{OSiR}''_3$  wherein  $\text{R}''$  is selected from the group {comprising} consisting of: Me, Et, and Pr.

6. (amended twice) A catalyst {Catalyst component} according to claim 1 wherein {characterized in that} in {the general} formula II, M is zirconium;  $\text{L}_1$  and  $\text{L}_2$  are cyclopentadienyl or indenyl

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{group}; R is hydrogen, a C<sub>1</sub>-C<sub>4</sub> alkyl wherein at least one hydrogen of one R is substituted with OSiR''<sub>3</sub> or a SiR'<sub>2</sub>-OSiR''<sub>3</sub> group, wherein R'' is selected from the group {comprising} consisting of: methyl, ethyl, propyl; [(R)<sub>c</sub>Q]<sub>m</sub> is H<sub>2</sub>C-CH<sub>2</sub>, CRH-CH<sub>2</sub>, RHC-SiR'<sub>2</sub>, R<sub>2</sub>C-SiR'<sub>2</sub>, and {or} SiRR'.

7. (amended twice) A catalyst {Catalyst component} according to claim 1 wherein {characterized in that} in {the general} formula II, M is titanium; L<sub>2</sub> is an oxygen or a nitrogen atom; L<sub>1</sub> is a cyclopentadienyl, indenyl or fluorenyl ring; [(R)<sub>c</sub>Q]<sub>m</sub> is H<sub>2</sub>C-CH<sub>2</sub>, CRH-CH<sub>2</sub>, RHC-SiR'<sub>2</sub>, R<sub>2</sub>C-SiR'<sub>2</sub>, or SiRR'.

9. (amended once) A catalyst {Solid catalyst component} according to claim 1 wherein {characterized in that} the porous inorganic solid is selected from the group {comprising} consisting of: silica, alumina, silica-alumina, aluminum phosphates, and mixtures thereof.

a<sup>2</sup>

10. (amended twice) A process for preparing {Process for the preparation of} a polymerization catalyst according to claim 1 {solid catalyst component} comprising the following steps:

- (a) impregnation, under anhydrous conditions and an inert atmosphere, of a solution of at least one catalyst component defined by formula I or II {catalyst component according to claims 1,} on {the supporting material} on a support at a temperature between -20°C and 90°C;
- (b) filtration and washing with a solvent{,} selected from the group consisting of aliphatic hydrocarbons and {or} aromatic {hydrocarbon} hydrocarbons.

11. (amended twice) A process for preparing {Process for the preparation of} a polymerization catalyst according to claim 1 {a

solid catalyst component} comprising the following steps:

- A2
- (a) depositing at least one catalyst component defined by formula I or II {the catalyst component according to claim 1} on {the} a support{,} by using a solution of the {compound} catalyst component to heterogenize;
  - (b) eliminating {the} solvent through evaporation to yield a solid residue;
  - (c) warming the solid residue up to temperature between 25 and 150°C.

12. (amended twice) A process as claimed in Claim 10, wherein {Process for the preparation of a solid catalyst component according to claim 10 characterized in that} before step (a) the catalyst component is mixed with a cocatalyst.

A3 ~~Surv~~  
14. (amended twice) A {Polymerization} catalyst according to claim 1 wherein {13, characterized in that} the cocatalyst is selected from {a} the group {comprising} consisting of: alkylaluminum, boron { {compound} compounds, {or} and mixtures {mixture} thereof.

Please add the following new claims.

A4 ~~Surv~~  
19. A process as claimed in Claim 11, wherein before step (a) the catalyst component is mixed with a cocatalyst.

20. A catalyst as claimed in Claim 1, wherein the catalyst is for the polymerization of alpha-olefins in solution, in suspension, in gas phase at low and high pressure and temperature or in mass at high pressures and high or low temperatures; and wherein the catalyst component is a metallocene complex.

June 28, 1999

21. A catalyst according to claim 2, wherein in formula I or II M is selected from the group consisting of: Ti, Zr, and Hf.

22. A catalyst according to claim 3, wherein in formula I or II M is selected from the group consisting of: Ti, Zr, and Hf.

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cont'd  
23. A catalyst according to claim 2, wherein the porous inorganic solid is selected from the group consisting of: silica, alumina, silica-alumina, aluminum phosphates, and mixtures thereof.

24. A catalyst according to claim 4, wherein the porous inorganic solid is selected from the group consisting of: silica, alumina, silica-alumina, aluminum phosphates, and mixtures thereof.

25. A catalyst according to claim 5, wherein the porous inorganic solid is selected from the group consisting of: silica, alumina, silica-alumina, aluminum phosphates, and mixtures thereof.

26. A catalyst according to claim 6, wherein the porous inorganic solid is selected from the group consisting of: silica, alumina, silica-alumina, aluminum phosphates, and mixtures thereof.

#### REMARKS

This response is being submitted within one month after the shortened one-month statutory period set for responding to the Office Action mailed on April 26, 1999. Therefore, a petition and fee for a one-month extension are enclosed herewith.

This response cancels Claims 8, 13, and 15-18; amends Claims 1-7,